

CLAIMS

1. A backlight system, comprising:

a light guide plate;

at least a light source disposed at at least one side of the light guide plate;

a diffusion plate and;

a reflection polarizer, which lets light polarized in one certain direction pass, and reflects light polarized in a polarization direction perpendicular to the said certain direction;

wherein the light guide plate, the diffusion plate and the reflection polarizer are stacked up one on top of the other, and a plurality of prisms are disposed on a surface of the diffusion plate, which forms a plurality of V-shaped grooves.

2. The backlight system as claimed in claimed 1, wherein the plurality of prisms are disposed parallel to one another.

3. The backlight system as claimed in claimed 2, wherein the parallel prisms are spaced apart at equal intervals.

4. The backlight system as claimed in claimed 1, wherein the prisms are each in a shape of a pyramid and are distributed evenly.

5. The backlight system as claimed in claimed 1, wherein a reflection plate is disposed under the light guide plate.

6. The backlight system as claimed in claimed 1, wherein a reflection film is formed on the light guide plate.

7. The backlight system as claimed in claimed 1, further comprising a light source cover which surrounds the light source on three sides.

8. The backlight system as claimed in claimed 1, wherein the light guide plate is a

flat plate.

9. The backlight system as claimed in claimed 1, wherein the light guide plate is in a shape of a wedge.

10. The backlight system as claimed in claimed 1, wherein a brightness enhancement film is disposed between the diffusion plate and the reflection polarizer.

11. A backlight system, comprising:

- a light guide plate;

- at least a light source disposed at at least one side of the light guide plate;

- a diffusion plate located above said light guide plate; and

- a reflection polarizer, which allows S polarized lights to pass, while reflects P polarized lights; located above said diffusion plate; wherein

the light guide plate, the diffusion plate and the reflection polarizer are stacked one another in sequence, and light conversion elements are disposed on a surface of the diffusion plate and facing toward the polarizer to transform the reflected P polarized light thereabouts to a common light and successively redirect said commonly light toward the polarizer without substantial involvement of the diffusion plate and the light guide plate.

12. A method of making a backlight system, comprising steps of:

- providing a light guide plate;

- positioning a light source beside said light guide plate;

- positioning a diffusion plate above said light guide plate;

- positioning a reflection polarizer above said diffusion plate which allows S polarized lights to pass and reflects P polarized lights; and

forming a plurality of light conversion elements on the diffusion plate facing toward the polarizer, so as to transform the reflected P polarized light to a common light thereabouts and successively redirect said common light toward said reflection polarizer without substantial involvement of at least the light guide plate.